BatLab Basic Project Kit - Joystick

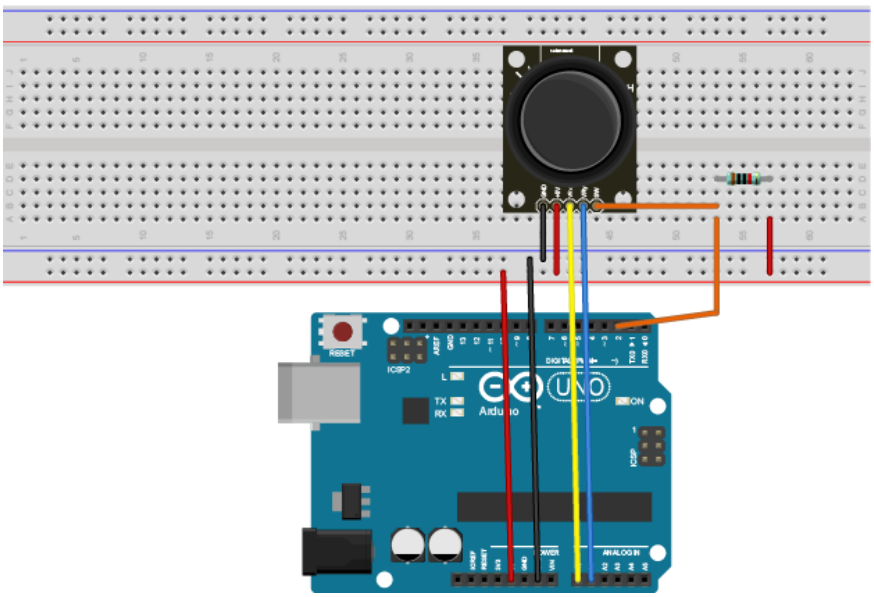
HOW IT WORKS

A joystick senses movement in two dimensions and measures it by varying voltages on its two potentiometers, one for each dimension. This joystick also has a momentary pushbutton which is activated by pressing straight down on the knob.

PARTS

- Arduino Uno
- Joystick
- 10KΩ resistor (silver marking)
- Breadboard & jumper wires

CIRCUIT



CODE

```
/* BatLab Basic Project Kit

Joystick example


The joystick outputs two analog voltages (VRx and VRy), and one digital
signal SW for the pushbutton.
Connect VRx to Arduino analog 0 and VRy to Arduino analog 1

Connect one end of a 10K resistor to Arduino 5V and the other end to SW on
the joystick and BUTTON_PIN on the Arduino
This "pull up" resistor ensures that a digitalRead of the BUTTON_PIN results
in a HIGH when the button is not pressed (otherwise the value will "float"
and be unpredictable).

*/

// Connections to joystick (change if you use different pins):

const int VERT_PIN = A0; // analog
const int HORIZ_PIN = A1; // analog
const int BUTTON_PIN = 2; // digital



// This sketch outputs serial data at 9600 baud (open Serial Monitor to
view).

void setup()
{
  pinMode(BUTTON_PIN,INPUT);   // make the BUTTON_PIN line an input; no need
for pinMode on the analog inputs

  Serial.begin(9600);    // set up serial port for output
}

void loop()
{
  int vertical, horizontal, select;

  // read all values from the joystick

  vertical = analogRead(VERT_PIN); // will be 0-1023
  horizontal = analogRead(HORIZ_PIN); // will be 0-1023
  select = digitalRead(BUTTON_PIN); // will be HIGH (1) if not pressed, and
LOW (0) if pressed

  // print out the values

  Serial.print("vertical: ");
  Serial.print(vertical,DEC);
  Serial.print(" horizontal: ");
  Serial.print(horizontal,DEC);
  Serial.print(" select: ");
```

```
  if(select == HIGH)
    Serial.println("not pressed");
  else
    Serial.println("PRESSED!");
}
```